

Claim Amendments

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-10 (Cancelled)

11. (New) A method of operating a network having a plurality of nodes, comprising:
maintaining in a receiving node a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node;

94 receiving a HELLO message containing an address of a new sending node;
transmitting a NEIGHBOR message that includes an address of the receiving node to said new sending node;

receiving a NEIGHBOR ACK message from said new sending node;
updating said neighbor table to reflect discovery of said new sending node and communication status of said new sending node; and

transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes.

12. (New) The method of claim 11, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a heard status, wherein neighbor nodes in the heard status have been heard by the receiving node but have not been determined to have heard a previous HELLO message from the receiving node.

13. (New) The method of claim 11, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a symmetric status, wherein neighbor nodes in the symmetric status have been heard by the receiving node and have been determined to have heard a previous HELLO message from the receiving node.

14. (New) The method of claim 11, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a lost status, wherein a neighbor node is

determined to be in the lost status when a HELLO message containing the address of that neighbor node has not been heard by the receiving node in a predetermined period of time.

15. (New) The method of claim 14, wherein the predetermined period of time corresponds to a HELLO-INTERVAL period multiplied by a predetermined number K.

16. (New) The method of claim 14, further comprising subsequently transmitting at least one HELLO message containing the address of the receiving node but not the address of a neighbor node that was previously in the list of neighbor nodes in the lost state.

17. (New) The method of claim 14, further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

96 18. (New) The method of claim 14, further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a symmetric status.

19. (New) The method of claim 14, further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a symmetric status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

20. (New) A network having a plurality of nodes, comprising:
a new sending node; and
a receiving node having a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node, wherein said receiving node receives a HELLO message from said new sending node containing an address of said new sending node, wherein said receiving node transmits a NEIGHBOR message that includes an address of the receiving node to said new sending node, wherein said receiving node receives a NEIGHBOR ACK message from said new sending node, wherein said receiving node updates said neighbor table

to reflect discovery of said new sending node and communication status of said new sending node, and wherein said receiving node transmits at least one HELLO message comprising only a list of neighbor nodes that have communication status changes.

21. (New) The network of claim 20, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a heard status, wherein neighbor nodes in the heard status have been heard by the receiving node but have not been determined to have heard a previous HELLO message from the receiving node.

22. (New) The network of claim 20, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a symmetric status, wherein neighbor nodes in the symmetric status have been heard by the receiving node and have been determined to have heard a previous HELLO message from the receiving node.

23. (New) The network of claim 20, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a lost status, wherein a neighbor node is determined to be in the lost status when a HELLO message containing the address of that neighbor node has not been heard by the receiving node in a predetermined period of time.

24. (New) The network of claim 23, wherein the predetermined period of time corresponds to a HELLO-INTERVAL period multiplied by a predetermined number K.

25. (New) The network of claim 23, wherein said receiving node subsequently transmits at least one HELLO message containing the address of the receiving node but not the address of a neighbor node that was previously in the list of neighbor nodes in the lost state.

26. (New) The network of claim 23, wherein said receiving node subsequently transmits at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

27. (New) The network of claim 23, wherein said receiving node subsequently transmits at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a symmetric status.

28. (New) The network of claim 23, wherein said receiving node subsequently transmits at least one HELLO message containing a list of neighbor nodes in a symmetric status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.
